

1. (1 pt.)

- This *quick check* is **closed book, notes, etc.**
- You may use a 3 in. \times 5 in. **reference card**, *hand-written by you*.
- Use the **classroom and textbook conventions** and terminology.

Read the above carefully; then write your name below:

2. (2 pts.) What is the asymptotic running time of *Kruskal's algorithm* on a graph $G = (V, E)$?

3. (2 pts.) What is the asymptotic running time of *Prims's algorithm using Fibonacci heaps* on a graph $G = (V, E)$?

4. (2 pts.) Define a *safe edge* as used by the GENERIC-MST algorithm.

5. (3 pts.) Explain what it means for a *cut* to *respect* a set of edges, in the context of the Theorem related to GENERIC-MST.